

Abstract:

Device for Atomizing and Comminuting Liquid Melts

5 The device for atomizing and comminuting liquid melts,
including a slag tundish to whose outlet an expansion or
cooling chamber is connected, whereby a propellant gas lance
opens into the outlet, which propellant gas lance is
surrounded by a tubular underflow weir immersed in the liquid
10 slag, is dimensioned such that the width of the gap between
the lower edge of the underflow weir and the tundish bottom is
smaller than 20%, preferably smaller than 15%, of the clear
width of the outlet, that the bottom of the tundish in the
region between the lower edge of the overflow weir and the
15 outlet is designed in a funnel-shaped manner, and that
supercritical vapor is injected through the propellant gas
lance to form an underexpanded free jet in the interior of the
melt jet, the flow speed at the nozzle mouth of the lance
being adjusted to sonic speed, thus ensuring a substantially
20 enhanced comminution performance. (Fig. 1)